

农业工程

5
2019

AGRICULTURAL ENGINEERING

NONGYE GONGCHENG

第9卷 Vol.9

广告

农机遭遇困境? 来约吧!

深度学习欧洲农机转型升级之路

2019年11月10—21日

2019 农业机械专业技术参观考察团

Technical Visit and Investigation Group

国际知名农机展会——德国汉诺威国际农业机械展览会

5家农机生产企业/农场/经销商参观考察

4个国家、8座欧洲知名城市文化体验

随团报名、更多信息请联系:

冉佳 客户总监 18600023173 / 010-64882623 / 502479221@qq.com

赵京 客户经理 18810778589 / 010-64882670 / 1539023672@qq.com

FARM 农业机械杂志社



扫描二维码 立即报名

ISSN 2095-1795

05>



万方数据

农业工程

NONGYE GONGCHENG

2019 年 第 5 期(第 9 卷)

目 次

• 装备与机械化 •

精准变量施肥机械研究现状与发展建议	韩 英 贾 如 唐 汉 (1)
基于 TRIZ 理论的圆草捆打捆机创新设计	孙文婷 王 强 孟玉刚 杨 莉 王振华 邢冀辉 (7)
动力换挡拖拉机 Hi-Lo 离合器应用特点	王 栋 董建梅 张金辉 (11)
丽水市水果产业发展机械装备需求	丁丽玲 (14)
山东省农田残膜污染现状及治理对策	王宗国 (17)

• 信息与电气化 •

自动转移喷灌机控制系统研制	姚 涛 周增产 董 微 兰立波 李秀刚 李宝安 (22)
互联网 + 时代智慧农业体系构建	江凤香 任大鹏 (28)
智慧温室大棚移动端监控软件设计与实现	陈小健 宋振继 (31)
水果外观质量智能化检测系统设计	王 哲 (34)
大数据在农业物联网中的应用	胡升耀 (38)

• 生物环境与能源 •

浙江县域生物质发电技术发展前景	李金麟 王 坤 王 蕾 井天军 (40)
湟水流域农业面源污染现状及对策	尤李俊 李润杰 王少丽 李广英 赵 霞 (44)
适于温室应用的无机相变材料放热特性	李彦荣 夏尔巴提·加尔恒 洽特合·阿迪丽 孜尔旦·海拉提 乃比江·艾合买提 许红军 (50)
农业固体废弃物制肥现状	王 洁 郑 涛 翁晓星 林 雪 黄 赟 陈长卿 费 焱 戴津婧 (55)

• 农副产品加工与贮藏 •

西红柿力学性能试验	张学宾 王秀芝 高富洋 付帮琴 张 杰 (58)
-----------------	----------------------------

• 食品科学与工程 •

碱性电解水对罗非鱼活体杀菌工艺优化	梁凤雪 陈海强 梁钻好 敖菲菲 冯均元 李建钰 余 铭 (62)
-------------------------	------------------------------------

• 水土工程 •

人工种植梭梭在荒漠化土地中植被恢复技术	王玉才 (68)
---------------------------	------------

• 土地资源管理 •

基于生态理念的农业用地微生物修复技术	张家学 (72)
--------------------------	------------

基于农村土地流转的山地土地增值模式调查与研究

——以安康市镇坪县千山庄园为例 赵 琳 徐明昊 (75)

• 设计制造及理论研究 •

气送式播种机气压平衡装置设计与试验 刘友华 刘立晶 李衍军 冉小琴 (78)

生物质颗粒燃料火焰消毒旋耕机设计 翁晓星 施新杭 黄 赟 赵 晋 林宇钢 (84)

玉米移栽机栽植机构运动及动力分析 贾 真 陈 霖 谭云峰 郭沫呈 张黎骅 (88)

真实齿面相交干涉误差来源及接触分析 杨文杰 汪中厚 (93)

• 教学研究 •

混合教学模式在《植保机械与应用》实验课中的应用与实践
..... 唐明祥 丁雪梅 王 成 温海娇 董桂军 马中威 席景会 刘金亮 王 英 张鑫生 (98)

农学专业拔尖创新型人才培养模式改革与实践
——以湖南农业大学为例 傅志强 高志强 (102)

基于翻转课堂的创新人才培养模式 赵法起 吴彦强 宋成宝 刘兴华 王冉冉 (106)

酿酒工程专业“教学工厂式”实践教学体系建设 宗绪岩 李 丽 李怡萱 叶光斌 王 陶 (109)

• 农学与生物技术 •

金露梅栽培和繁殖技术 赵英兰 (112)

蚱壳虫药剂防治研究进展 周楠楠 李 明 李荣玉 张国辉 (115)

• 农业经济管理 •

促进粮食作物适度规模化生产的关键问题及解决方法 潘志国 李 晨 杨然兵 (118)

工程咨询服务农业走出去初探 刘祖昕 石彦琴 赵跃龙 (121)

基于 SWOT 分析的陕西省现代农业发展对策 王艳利 (124)

陕南新农村休闲农业发展现状及对策 李 斌 杨豪中 (127)

基于国外经验的我国畜牧业农产品质量安全管理对策 罗永胜 (130)

农业政策对农村经济发展的影响 樊维聪 (133)

农业产业化发展研究文献综述 刘 芳 (136)

智能种植技术在农业生态园的应用策略 张志敏 (139)

休闲农业旅游中农耕文化资源开发利用 付 佳 (141)

• 行业动态 •

农机行业隆重纪念“农业的根本出路在于机械化”论断发表 60 周年，表彰 60 位杰出人物
..... 农机君 (前插 1)

AGRICULTURAL ENGINEERING

Vol. 9 No. 5 2019

Contents

Equipment and Mechanization

Research Status and Development Suggestions of Precision Variable-rate Fertilization Machine
..... HAN Ying, JIA Ru, TANG Han (1)

Innovative Design for Round Baler Based on TRIZ Theory
..... SUN Wenting, WANG Qiang, MENG Yugang, YANG Li, WANG Zhenhua, XING Jihui (7)

Application Characteristics of Hi-Lo Clutch of Power Shift Tractor
..... WANG Dong, DONG Jianmei, ZHANG Jinhui (11)

Requirements of Mechanized Equipments about Fruit Property in Jinyun Country DING Liling (14)

Current Situation and Control Measures of Farmland Residual Membrane Pollution in Shandong Province
..... WANG Zongguo (17)

Information and Electrification

Development of Control System for Automatic Transfer Device for Mobile Sprinkling Irrigation Machine
..... YAO Tao, ZHOU Zengchan, DONG Wei, LAN Libo, LI Xiugang, LI Baoan (22)

Construction of Intelligent Agriculture System in Internet + JIANG Fengxiang, REN Dapeng (28)

Design and Implementation of Intelligent Greenhouse Monitoring Software Based on Mobile Internet
..... CHEN Xiaojian, SONG Zhenji (31)

Design of Intelligent Detection System for Fruit Appearance Quality WANG Zhe (34)

Application of Big Data in Agricultural Internet of Things HU Shengyao (38)

Biological Environment and Energy

Development Prospects of Biomass Power Generation Technology in Zhejiang County
..... LI Jinlin, WANG Kun, WANG Lei, JING Tianjun (40)

Current Situation and Countermeasures of Agricultural Non-Point Source Pollution in Huangshui River Basin
..... YOU Lijun, LI Runjie, WANG Shaoli, LI Guangying, ZHAO Xia (44)

Exothermic Characteristics of Inorganic Phase Change Materials Suitable for Greenhouse Applications
..... LI Yanrong, XIAERBATI · Jiaerhen, QIATEHE · Adili,
ZIERDAN · Hailati, NAIBIJIANG · Aihemaiti, XU Hongjun (50)

Present Situation of Agricultural Solid Waste Fertilizer Production
..... WANG Jie, ZHENG Tao, WENG Xiaoxing, LIN Xue,
HUANG Yun, CHEN Changqing, FEI Yan, DAI Jinjing (55)

Processing and Storage of Farm and Sideline Products

Mechanical Properties of Tomatoes
..... ZHANG Xuebin, WANG Xiuzhi, GAO Fuyang, FU Bangqin, ZHANG Jie (58)

Food Science and Engineering

Disinfection Technology Optimization of Alkaline Electrolyzed Water for Living Tilapia
..... LIANG Fengxue, CHEN Haiqiang, LIANG Zuanhao, AO Feifei, FENG Junyuan, LI Jianyu, YU Ming (62)

Water-soil Engineering

Vegetation Restoration Technology of Planting *Haloxylon ammodendron* in Desertification Sandy Land
..... WANG Yucai (68)

Land Resource Management

Microbial Rehabilitation Technology of Agricultural Land Based on Ecological Concept ZHANG Jiaxue (72)

Investigation and Research on Value-added Model of Mountain Land Based on Rural Land Transfer:
Taking Qianshan Manor in Zhenping County, Ankang City as an Example ZHAO Lin, XU Minghao (75)

Design, Manufacture and Theoretical Research

Design and Experiment of Pressure Balance Device of Pneumatic Conveying Seeder
..... LIU Youhua, LIU Lijing, LI Yanjun, RAN Xiaoqin (78)

Design of Flame Rotary Cultivator Fueled by Biomass Pellets
..... WENG Xiaoxing, SHI Xinhang, HUANG Yun, ZHAO Jin, LIN Yugang (84)

Movement and Dynamics Analysis of Corn Transplanting Planting Mechanism
..... JIA Zhen, CHEN Lin, TAN Yunfeng, GUO Mocheng, ZHANG Lihua (88)

True Tooth Surface Intersection Error Source and Contact Analysis YANG Wenjie, WANG Zhonghou (93)

Research on Teaching

Application and Practice of Blended Teaching Mode to *Plant Protection Machinery and Application*
Experimental Course
..... TANG Mingxiang, DING Xuemei, WANG Cheng, WEN Haijiao, DONG Guijun,
MA Zhongwei, XI Jinghui, LIU Jinliang, WANG Ying, ZHANG Xinsheng (98)

Reform and Practice on Cultivation Mode of Top Innovative Talent in Agronomy Major:
Taking Hunan Agricultural University as an Example FU Zhiqiang, GAO Zhiqiang (102)

Innovative Talents Cultivation Mode Based on Flipping Classroom
..... ZHAO Faqi, WU Yanqiang, SONG Chengbao, LIU Xinghua, WANG Ranran (106)

Construction of Practical Teaching System of “Teaching Factory” in Brewery Engineering Specialty
..... ZONG Xuyan, LI Li, LI Yixuan, YE Guangbin, WANG Tao (109)

Agronomy and Biotechnology

Cultivation Techniques and Propagation Strategies of Jinlumei ZHAO Yinglan (112)

Research Progress on Insecticide Control of Scale Insect
..... ZHOU Nannan, LI Ming, LI Rongyu, ZHANG Guohui (115)

Management of Agricultural Economy

Key Issues and Solutions for Promoting Moderate Scale Production of Food Crops
..... PAN Zhiguo, LI Chen, YANG Ranbing (118)

A Preliminary Research on Engineering Consulting Service for Agricultural Going Global
..... LIU Zuxin, SHI Yanqin, ZHAO Yuelong (121)

Countermeasures of Modern Agriculture Development in Shaanxi Province Based on SWOT
..... WANG Yanli (124)

Present Situation and Countermeasure of Leisure Agriculture in New Rural Village of Southern Shaanxi
..... LI Bin, YANG Haozhong (127)

Quality and Safety Management Countermeasure of Agricultural Products in China’s Animal
Husbandry Based on Foreign Experience LUO Yongsheng (130)

Impact of Agricultural Policy on Rural Economic Development FAN Weicong (133)

Literature Review on Development of Agricultural Industrialization LIU Fang (136)

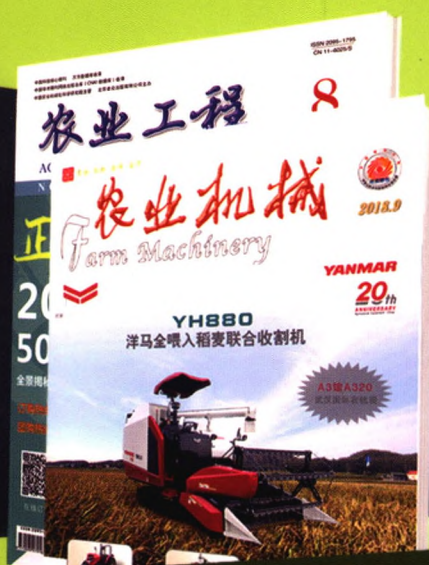
Application Strategy of Intelligent Planting Technology in Agricultural Ecological Park ZHANG Zhimin (139)

Exploitation and Utilization of Agricultural Culture Resources in Leisure Agricultural Tourism FU Jia (141)

FARM
MACHINERY

农业机械杂志社

农机发烧君的 杂货铺



Magazine

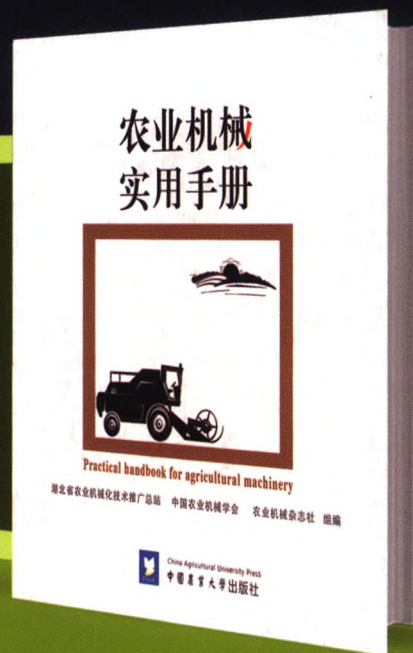
杂志订阅

《农业机械》、《农业工程》
全年12期杂志在线订阅

专业书籍 Book

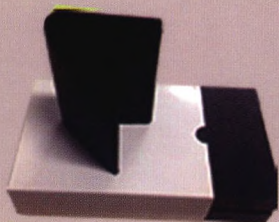
《农业机械实用手册》

让你快速成为农机专业人士的实用书籍



农机模型 Model

拖拉机、收获机、打捆机、插秧机……
各种农机模型



文创用品 Other

农业机械60周年笔记本、农机吉祥物、
帽子、卡包、名片夹等



扫码进入微店
万方数据

www.zhiguker.com

汇聚品质农机人